QUARTERLY SUMMARY

OF THE

IMPROVEMENTS AND DISCOVERIES

IN THE

MEDICAL SCIENCES.

ANATOMY AND PHYSIOLOGY.

1. *On the Function of the Prostate Gland.*—Dr. KRAUS, Editor of the *Vienna Medical Times*, states his belief that he has discovered some essential points relating to the function of the prostate gland, and makes some preliminary statements which he conceives will be found to deserve attention.

1. The seminal fluid, as long as it remains within the testes, vesicles, and other seminal passages, is colourless and scentless, being in appearance exactly like fresh honey while deposited in the comb; and in its reactions it is neutral.

2. Only when it has quitted the passages and arrived in the urethra does it acquire its white colour and its peculiar faint smell.

3. During its passage through the prostatic portion of the urethra, the prostate empties out its fluid, colours the semen white, and confers upon it the faculty of coagulating when exposed to the air (alkaline reaction). Semen taken from the seminal vesicles does not coagulate, but remains clear, colourless, and scentless.

4. The spermatozoa, in the absence of the prostatic fluid, cannot live in the mucous membrane of the uterus of mammalia; but with its aid they may live for a long time in the uterine mucus, often more than thirty-six hours.

I have conducted these experiments with the greatest care, and recommend their repetition, in order that the truth of my positions may be ascertained. From the above, the conclusion may be drawn that the prostatic fluid exercises an unlimited influence on the viability of the spermatozoa, sustaining it when endangered by the mucus secreted by the mucous membrane of the uterus.

This is undoubtedly the case with those species of animals which possess a prostate, and I intend next to extend my investigations to those species which are destitute of this.—*Med. Times and Gaz.*, Feb. 11, 1871.

2. *True Hermaphroditism in Man*, by Dr. C. L. HEPPNER, of St. Petersburg.—The name true hermaphroditism is only properly applied to such cases as present in the same person the organs both of the male and female, and from the class we must eliminate all cases in which the only peculiarity is that the organs common to both are so formed as to make it difficult from these alone to distinguish the sex. The only absolute criterion of true hermaphroditism, then, is the presence of the glands peculiar to the two sexes, the ovaries with Graafian vesicles on the one hand, and the testicles with the seminal tubules on the other. On this principle we must distinguish as spurious hermaphrodites

all cases of simple cryptorchismus, hypospadia, defective development of the penis, hypertrophy of the clitoris, narrowness or occlusion of the vagina, and alteration of position of the ovaries. The author collects from the literature of the subject ten cases of supposed true unilateral hermaphroditism, and seven of supposed bilateral; but he considers that in these cases the evidence of true hermaphroditism has not been complete, for in some of them the description has been imperfect, and in some there was some defect in the structure of the glands—for instance, the Graafian vesicles were wanting in the ovary in some cases, and in one there was cancer of the ovary. The author, however, gives the details of a case which he has examined, in which there was undoubted true bilateral hermaphroditism, the ovaries and testicles on both sides being present, and quite recognizable by their microscopic characters, Graafian vesicles being found in the ovaries and seminal tubules in the testicles.—*Glasgow Med. Journ.*, May, 1871, from *Reichert & Du Bois-Reymond's Archiv*, No. V., 1870.

3. *Absence of Urinary and Generative Apparatus in a Fœtus.*—Dr. MATTHEWS DUNCAN read before the Medico-Chirurgical Society of Edinburgh a note of this rare malformation which occurred in an eight months' fœtus otherwise healthy, which survived its birth about forty-eight hours. In it there was entire absence of the urinary and generative systems. There was not the slightest indication even of a perineal raphe, nor any external trace of organ except a tubercle of the size of a pea, which was found on examination to contain no structure except skin and fat. The rectum was full of meconium, and ended abruptly in the pelvis; not a trace of bladder or ureters existed. Small bodies, which were probably the suprarenal capsules, were found in the natural position; but these could not have been rudimentary kidneys, as there was no trace of pelves. There was no cystic degeneration. Two little bodies like peas containing a vestige of tubular structure were found in the inguinal canals. The chest-organs were healthy.—Dr. Duncan remarked on the extreme interest of this case, not only from its rarity, but also in a physiological point of view, in its bearing on the question of the excretion of urine during fœtal life. It contrasted with the rare case of hydronephrosis which last year he had brought before the Society.—*Brit. Med. Journal*, March 4, 1871.

MATERIA MEDICA, GENERAL THERAPEUTICS, AND PHARMACY.

4. *The Present State of our Knowledge respecting the Action of Mercury on the Liver.*—Dr. THOMAS R. FRASER, in a very interesting paper in the *Edinburgh Medical Journal* for April, 1871, discusses this subject. When we consider, he says, that the belief in the existence of the cholagogue action of mercury is founded, in a great measure, on explanations of its effects in pathological conditions regarding which no exact knowledge exists, it is not surprising that the modern doctrines of the nature of the action are somewhat vague and even conflicting. These doctrines appear to be resolvable into the four following: 1. That mercury simply increases the *flow* of bile into the intestines; 2. That it causes an increased *formation* of bile by removing abnormal conditions that interfere with the secreting function of the liver; 3. That it causes an increased *formation* of bile by an indirect action on the liver; 4. That it causes an increased *formation* of bile by a direct and primary action on the liver. It is of importance to bear in mind that, as has been stated, the evidence on which these doctrines are founded is mainly derived from observations in disease. This evidence has failed to satisfy many physicians, who maintain, what may for convenience be termed a fifth doctrine, that mercury has no cholagogue action whatever.

Each of these doctrines Dr. Fraser examines in detail, and arrives at the following conclusion as regards them in the order in which they have been mentioned:—